Message

From: Zachary Hopkins [zrhopkin@ncsu.edu]
Sent: 4/18/2017 2:55:58 PM
To: Strynar, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5a9910d5b38e471497bd875fd329a20a-Strynar, Mark]
Subject: Re: Question about GenX and ADONA detection limits, and PFAS method consistency

Sounds good. I will aim to find you Thursday morning.

On Tue, Apr 18, 2017 at 10:52 AM, Strynar, Mark <Strynar.Mark@epa.gov> wrote:

> Zack,
>
> We can assess what the on column (OC) sensitivity is on the MS/MS. However with either of these solutions (10 ug/L or 50 ug/L) if you processed 25 to 50 mL you would have between 250 ng and 2500 ng in the final extract. If this is reduced to 1 mL of methanol, both of these have plenty of signal and likely too much. 250ng/1000 ul or 2500 ng/1000uL. If we do the typical 75:25 dilution for analysis that leaves you with 62.5 pg/uL in the lowest and 625 pg/uL in the highest. We can inject up to 100 uL recall. I suspect 10 – 25 pg OC is sufficient to see OC. <1000 pg OC is what we aim at for a good repeatable signal and non-saturation of the detector.
>
> Concerning the issues with the MS/MS results I think we need to look at those on a case by case basis. My experience is generally the instrument is fairly robust and the analyst or sample prep is the bulk of the variability we see. Every time a method is done with any minor tweak it is no longer the same method. If you process 500 mL of water and still see these issue I would be concerned. Perhaps you should do that and see what the results are. Not sure why you would get better results on the TOFMS for the same sample. You will have to show me that .
>
> Wednesday does not look good for me. I have AM meetings and an afternoon webinar I need to give 1:30 to 3:00 PM. How about Thursday AM.
>
> Mark
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> **From:** Zachary Hopkins [mailto:zrhopkin@ncsu.edu]
> **Sent:** Tuesday, April 18, 2017 8:44 AM

To: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: Question about GenX and ADONA detection limits, and PFAS method consistency

Mark,

Dr. Knappe is looking at seeing if microbes can degrade GenX and/or ADNOA. However, we we want to make sure we start at a high enough concentration that we can detect the compound in solution. What do you think the detection for amount loaded on column is? If we were to generate 50 mL of solution starting at an initial concentration of 10-50ug/L do you think we could be able to see the compound following SPE by loading 25 or 50 mL on to a wax plus cartridge?

Additionally, Dr. Knappe has been pushing me to talk to you more about he methods for the PFASs lately. I know we have talked briefly about some of the issues noticed during runs lately. However, what your thoughts were on why we see QCs and standards vary so much when run on the triple quad and created from the same stock? Is this just because there is so much drift in the machine over time? Even though we include IS which should correct, might it not be correcting for drift in signal? We have also noticed better results for the same samples on the TOF, why might that be?

I was going to try to make it by the EPA tomorrow. Maybe we can sit and talk about it more in depth. I know you typically have meetings Wednesday mornings. Would it be better to meet after lunch to chat?

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Best,

Zack Hopkins

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